ABSTRACT OF THE DISCLOSURE

Disclosed is a binder for a lithium-sulfur battery including a butadiene-based copolymer. The binder exhibits chemical resistance to polysulfides, is stable a battery working temperatures, forms an emulsion in organic solvents and exhibits high adherence to positive active materials and electrodes used in the lithium-sulfur battery. The disclosed binder compositions, due to their high adherence to positive active materials allow for higher relative amounts of positive active materials to be used in the battery resulting in a high capacity lithium-sulfur battery.